



KENWOOD®
HI/FI STEREO COMPONENTS

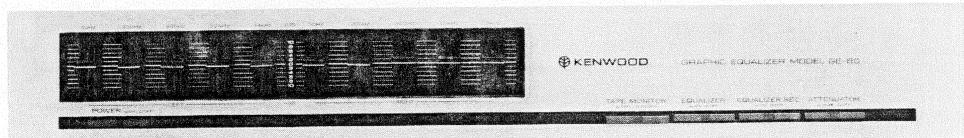
SERVICE MANUAL

GE-80/PM-80/RA-80

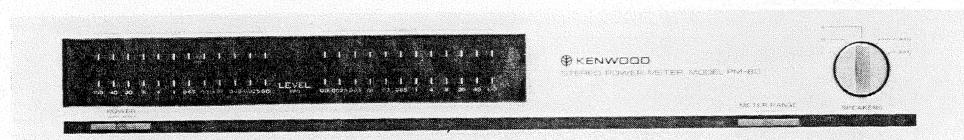
An item of adjustment is written in three languages — English, French and German.

Un article sur réglages est écrit en trois langues, Anglais, Français et Allemand.

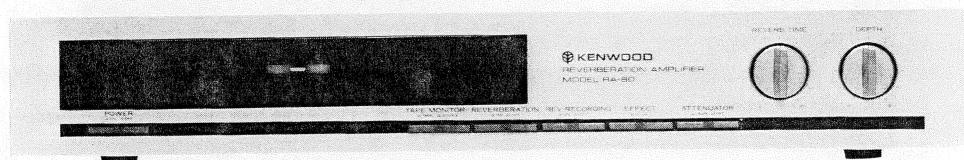
Ein Artikel der Abgleich wird auf drei Sprachen, Englische, Französisch und Deutsch geschrieben.



GE-80



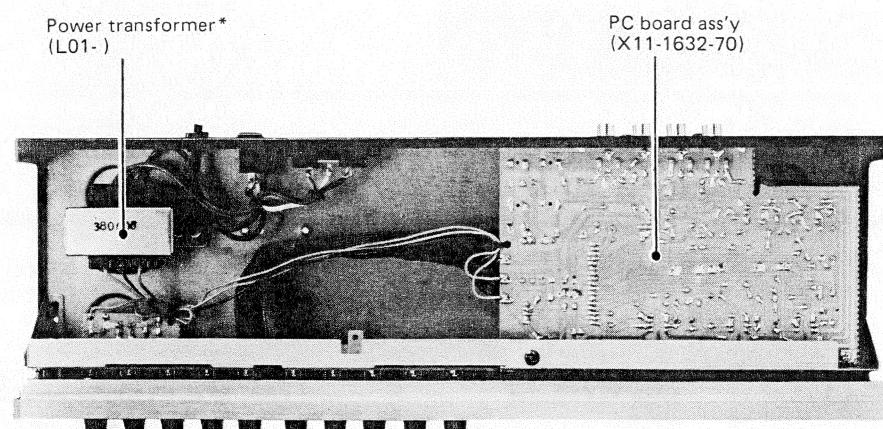
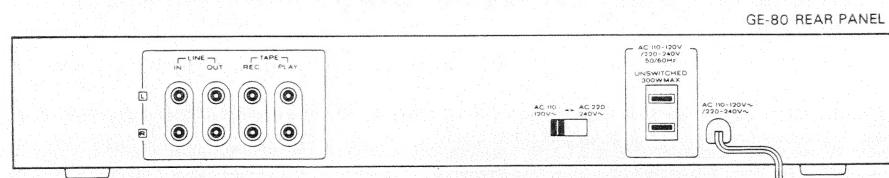
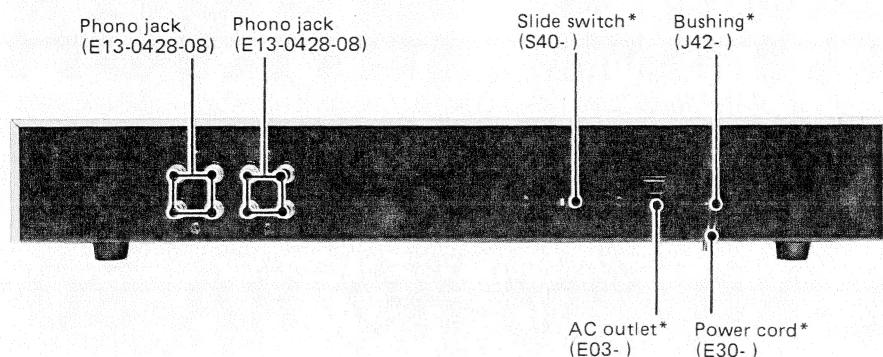
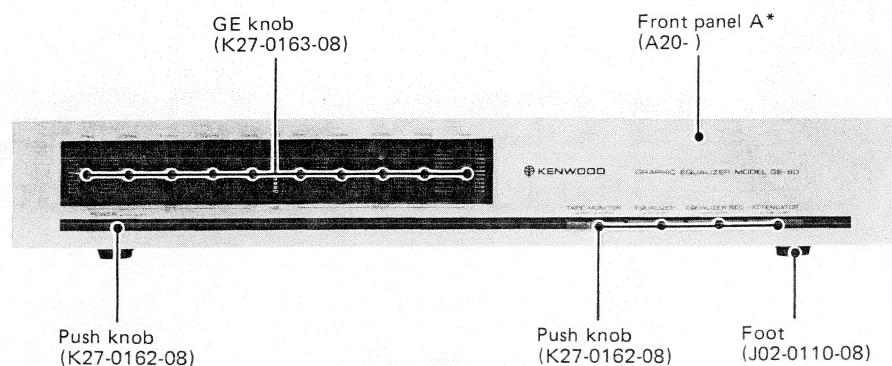
PM-80



RA-80

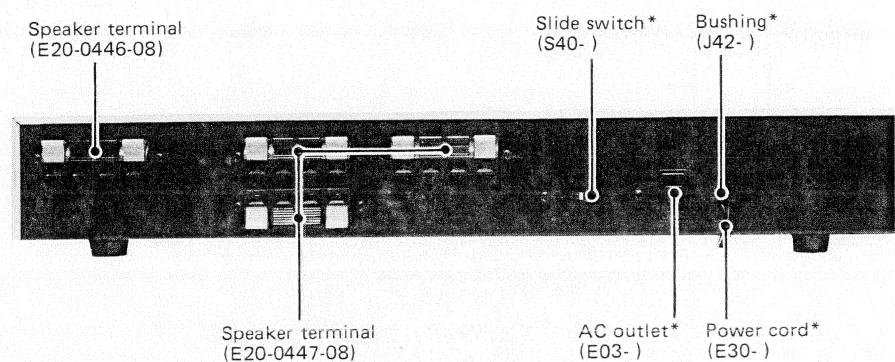
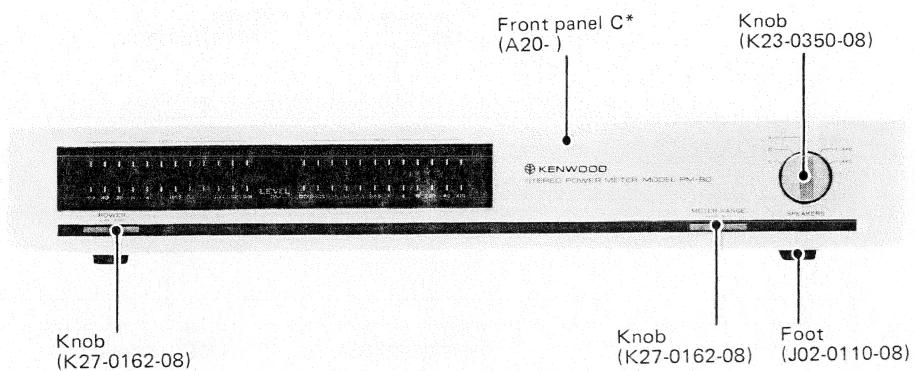
GRAPHIC EQUALIZER / STEREO POWER METER / REVERBERATION AMPLIFIER

GE-80 EXTERNAL & INTERNAL VIEWS

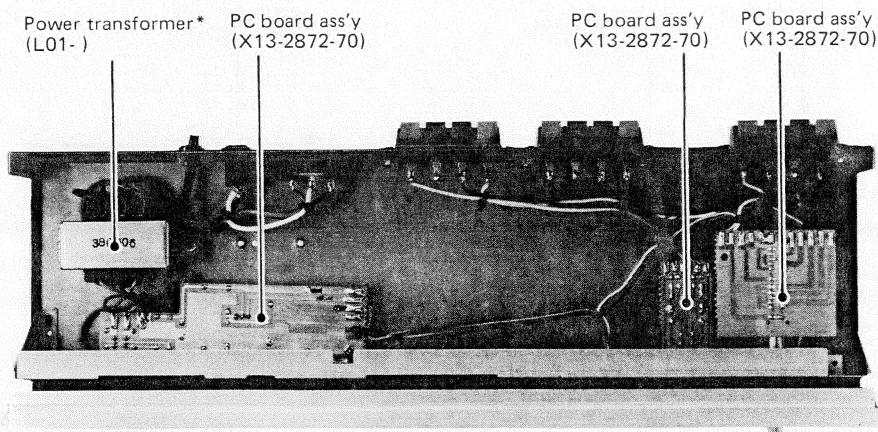
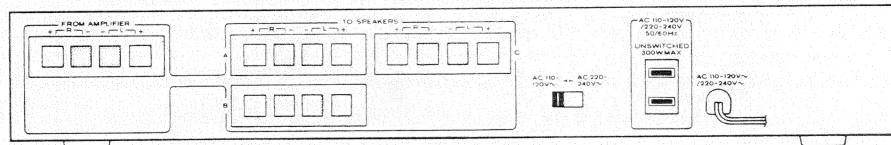


* Refer to Parts List.

PM-80 EXTERNAL & INTERNAL VIEWS

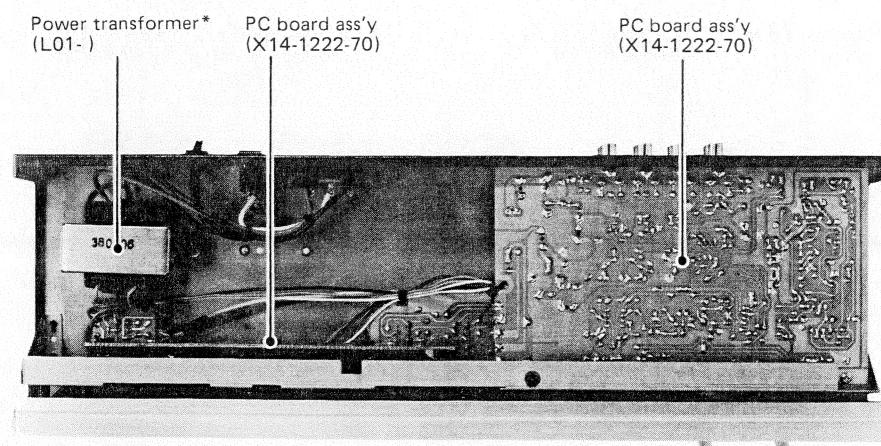
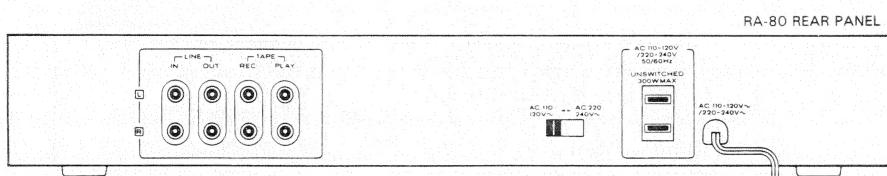
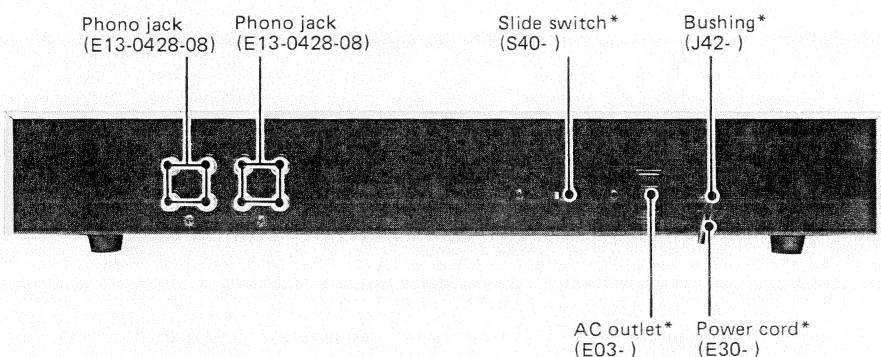
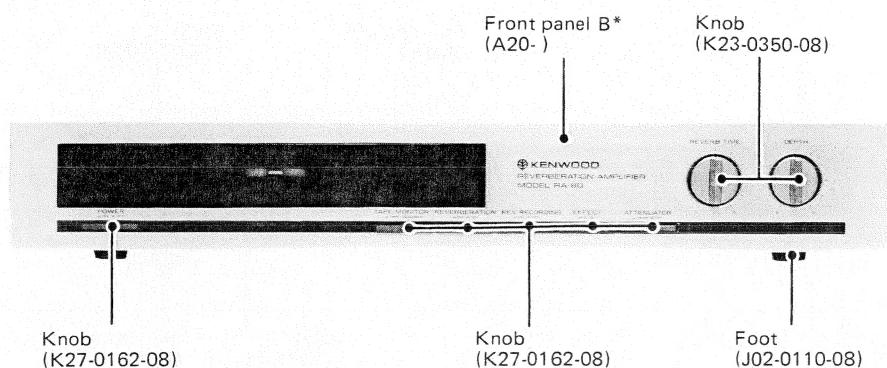


PM-80 REAR PANEL



* Refer to Parts List.
PM-80 EXTERNAL & INTERNAL VIEWS 3

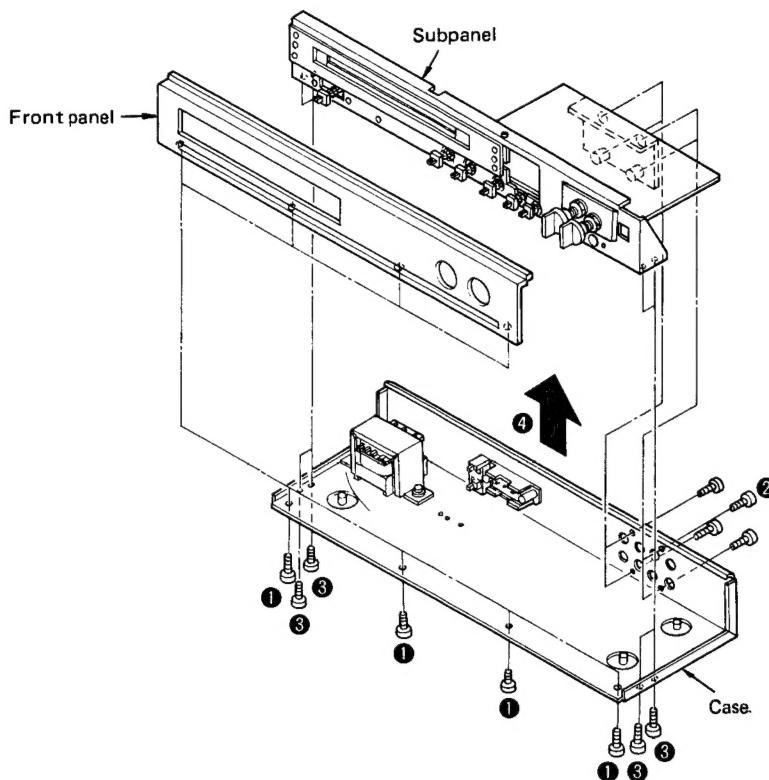
RA-80 EXTERNAL & INTERNAL VIEWS



* Refer to Parts List.

DISASSEMBLY FOR REPAIR

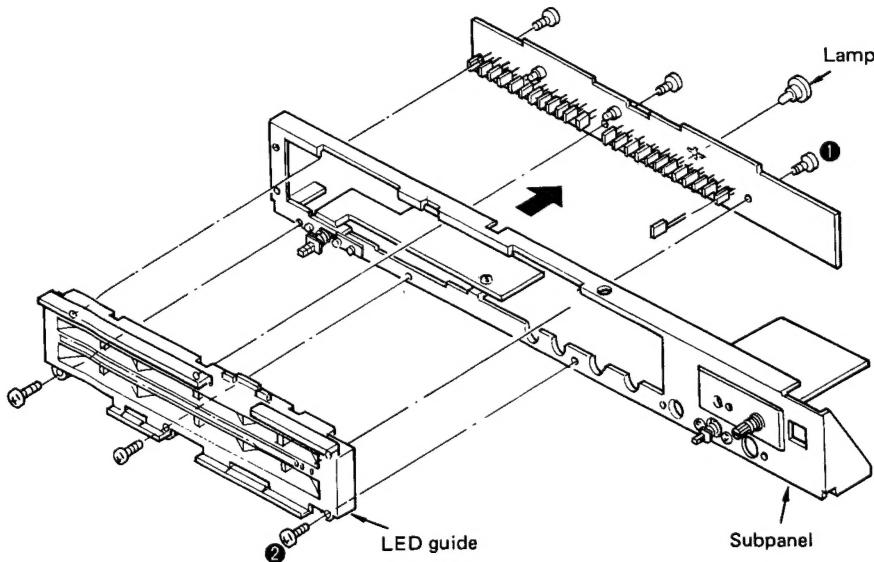
GE-80, RA-80 PCB ASS'Y DETACHMENT



- 1 Remove the screws from the front panel.
- 2 Remove the screws from the phono jacks.
- 3 Remove the screws from the case.
- 4 Separate the subpanel ass'y from the case.

Note: Illustration is in case of the RA-80.

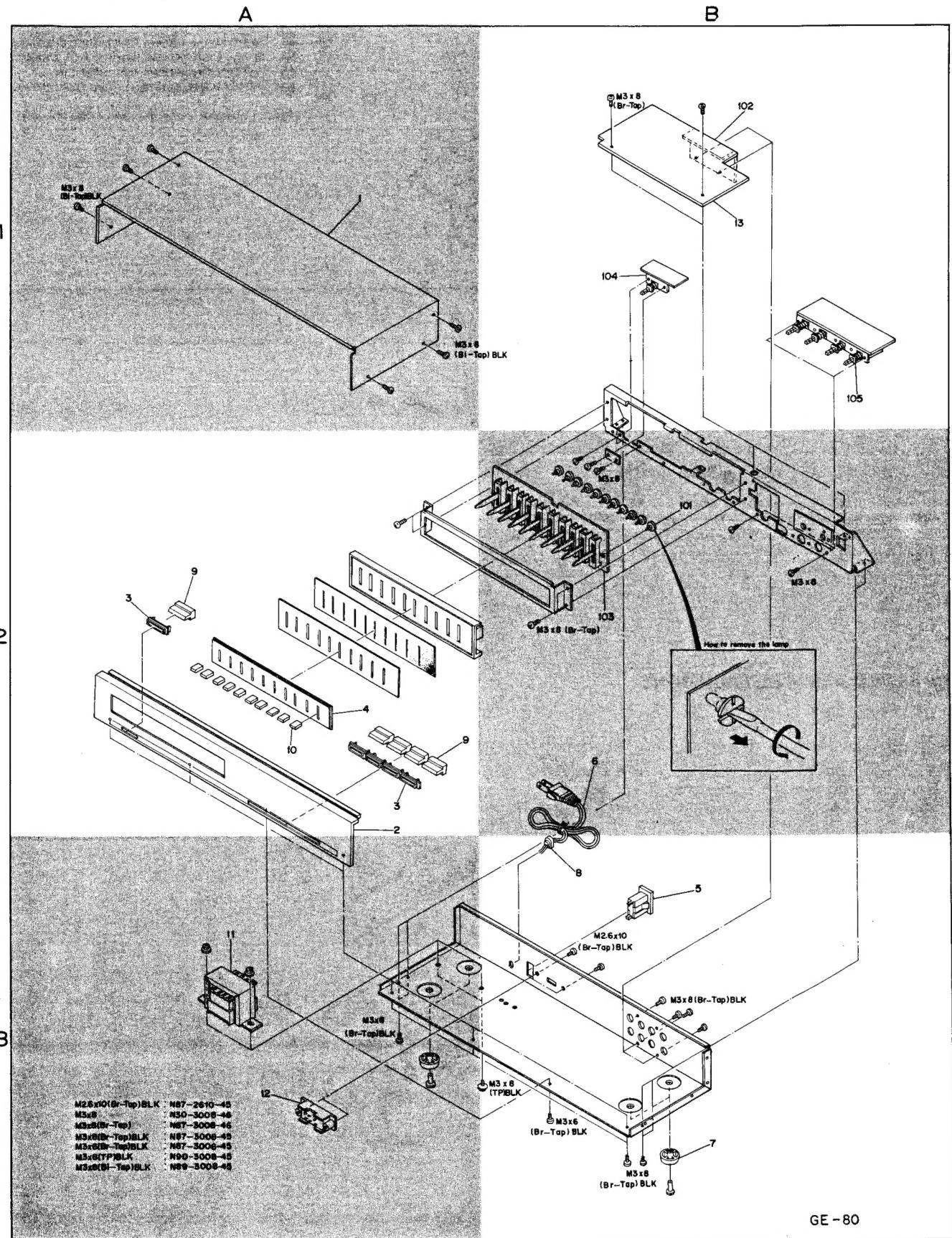
PM-80 PCB ASS'Y DETACHMENT



- 1 When replacing LEDs on the PC board, remove the screws from the PC board.
- 2 When replacing LED's guide, remove the screws from the subpanel.

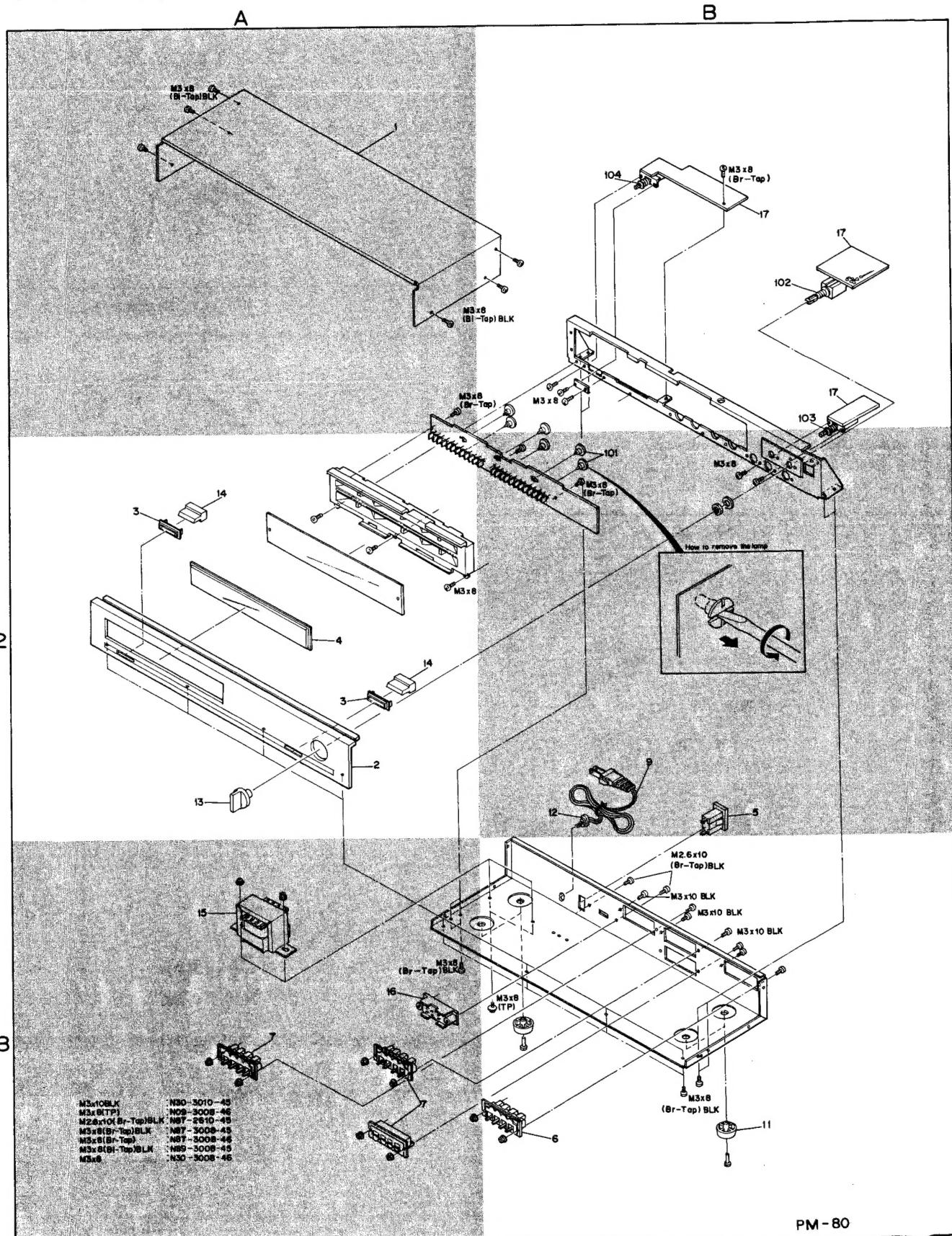
GE-80 EXPLODED VIEW

See Parts List on page 14.



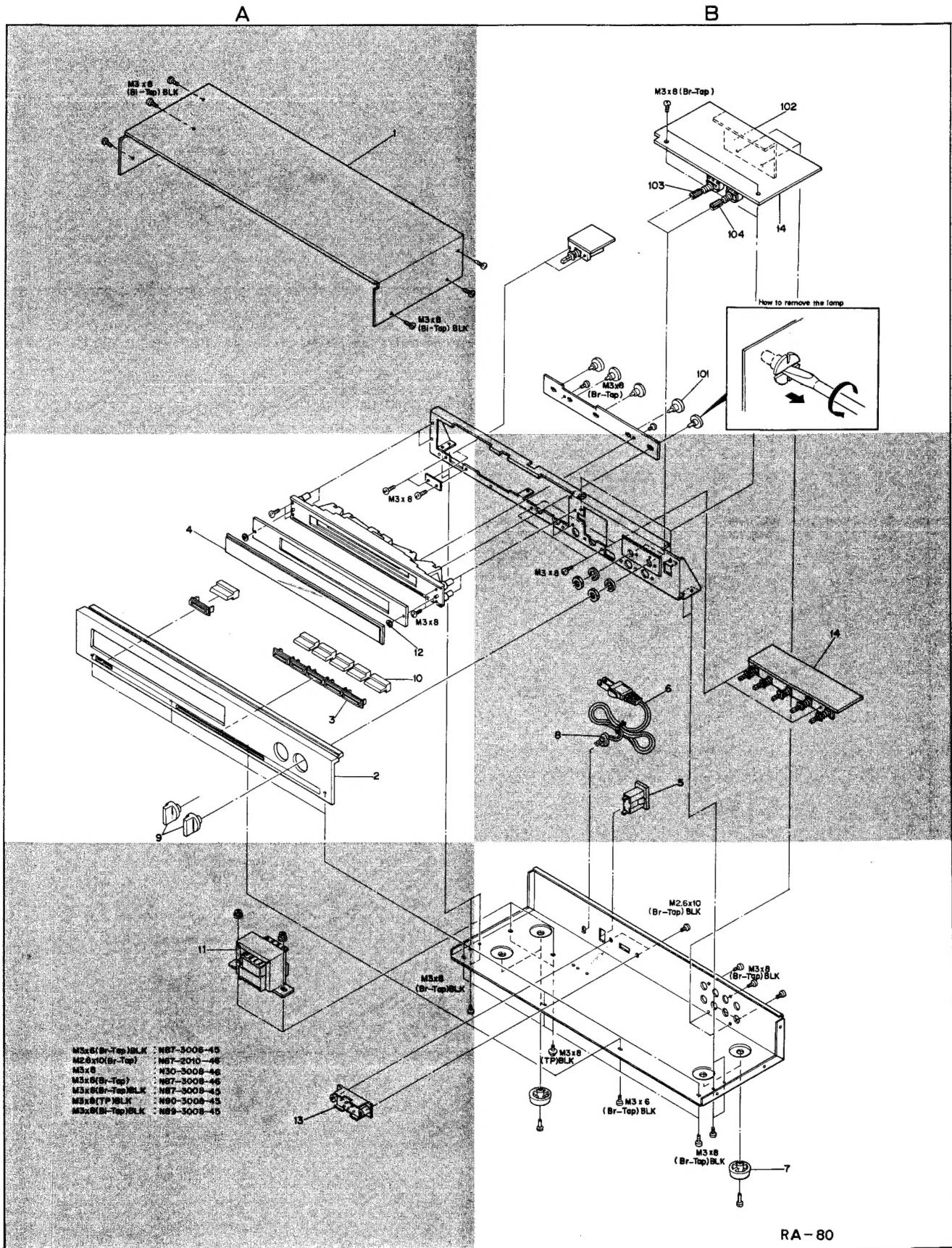
PM-80 EXPLODED VIEW

See Parts List on page 14.



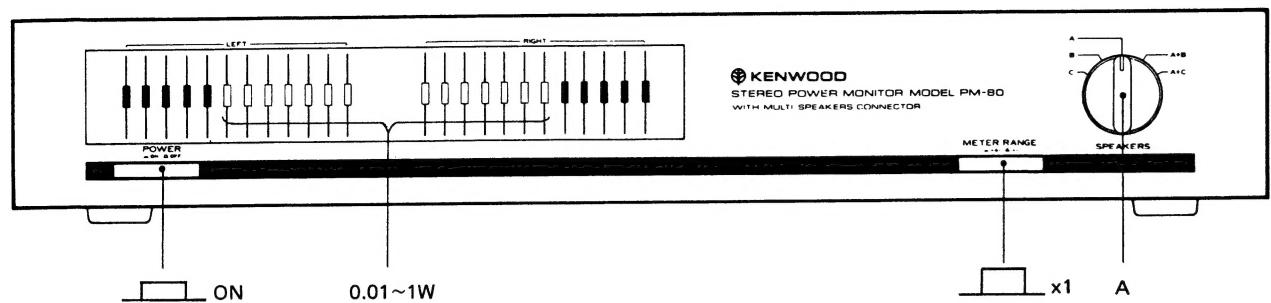
RA-80 EXPLODED VIEW

See Parts List on page 15.

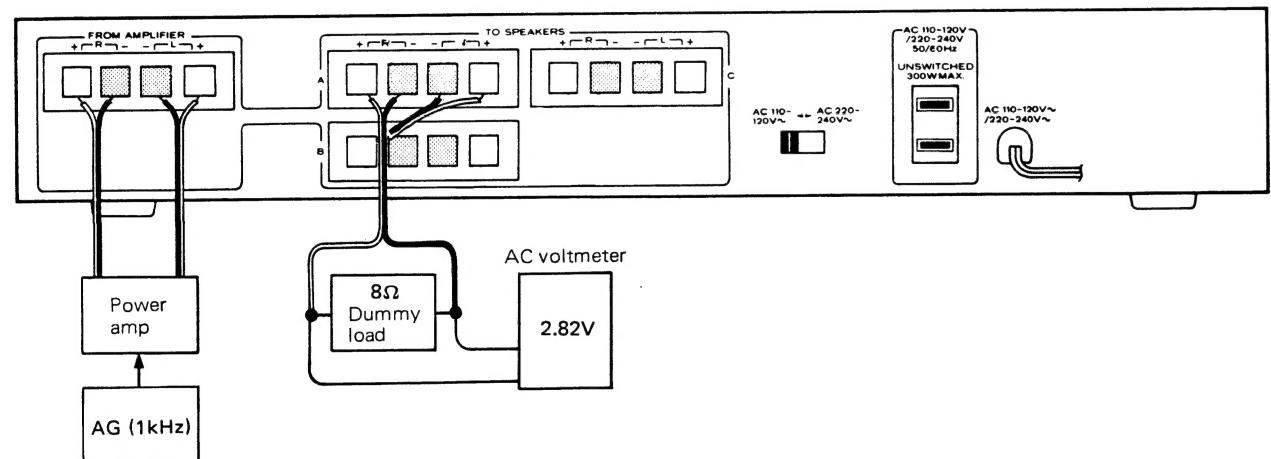


PM-80 ADJUSTMENT/RÉGLAGES/ABGLEICH

GE-80 PC BOARD



PM-80 REAR PANEL



TEST INSTRUMENTS

Power amp Ampli
 Audio generator Générateur audio fréquences
 AC voltmeter Voltmètre CA
 Dummy load Fausse charge (resistance)

APPAREILLAGE

Leistungsverstärker
 NF-Signalgenerator
 Wechselspannungsmesser
 Belastungsnachbildung

PRÜFINSTRUMENTE

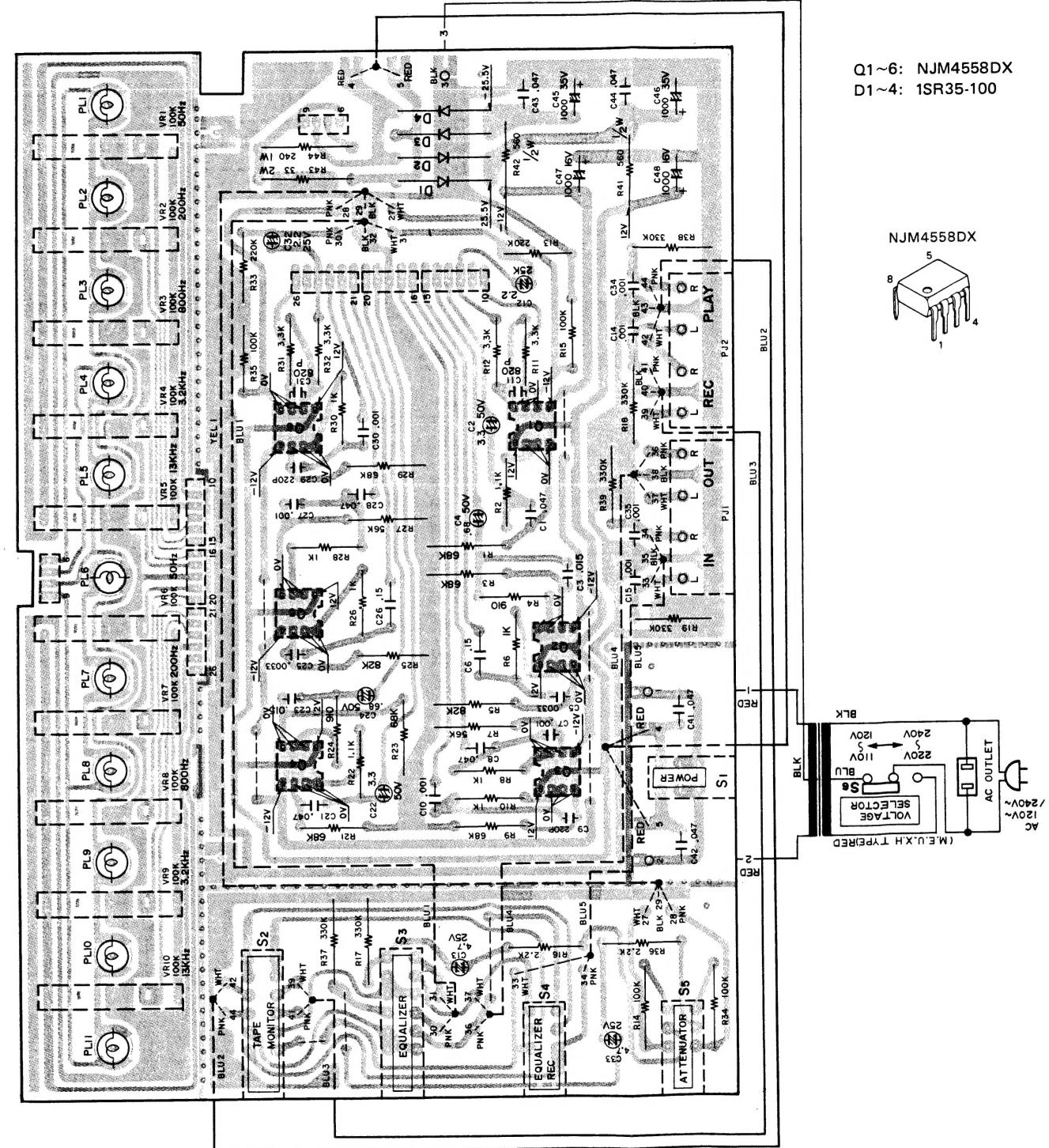
POWER METER LEVEL ADJUSTMENT

1. Connect an AG (via a power amp) and a dummy load to "FROM AMPLIFIER" and "TO SPEAKERS" terminals respectively.
2. Connect an AC voltmeter across the dummy load.
3. Set the AG to 1kHz and its output for a 2.82V reading of the AC voltmeter.
4. Adjust the trimming pot. VR1 (VR21) for 1W reading of the power meter.

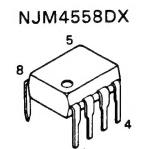
RÉGLAGE DU LED MÈTRE

1. Relier un AG (par un ampli) sur les prises "FROM AMPLIFIER" et une fausse charge (résistance) sur les bornes de "TO SPEAKERS".
2. Relier un voltmètre de C.A. aux deux extrémités de la résistance (ou aux bornes de sortie + et -).
3. Régler le potentiomètre ajustable VR1 (VR21) en sorte que le LED's mètre indique 1W lorsque le voltmètre indique 2.82V/8Ω.

▼ PC BOARD ASS'Y (X11-1632-70) Foil side view

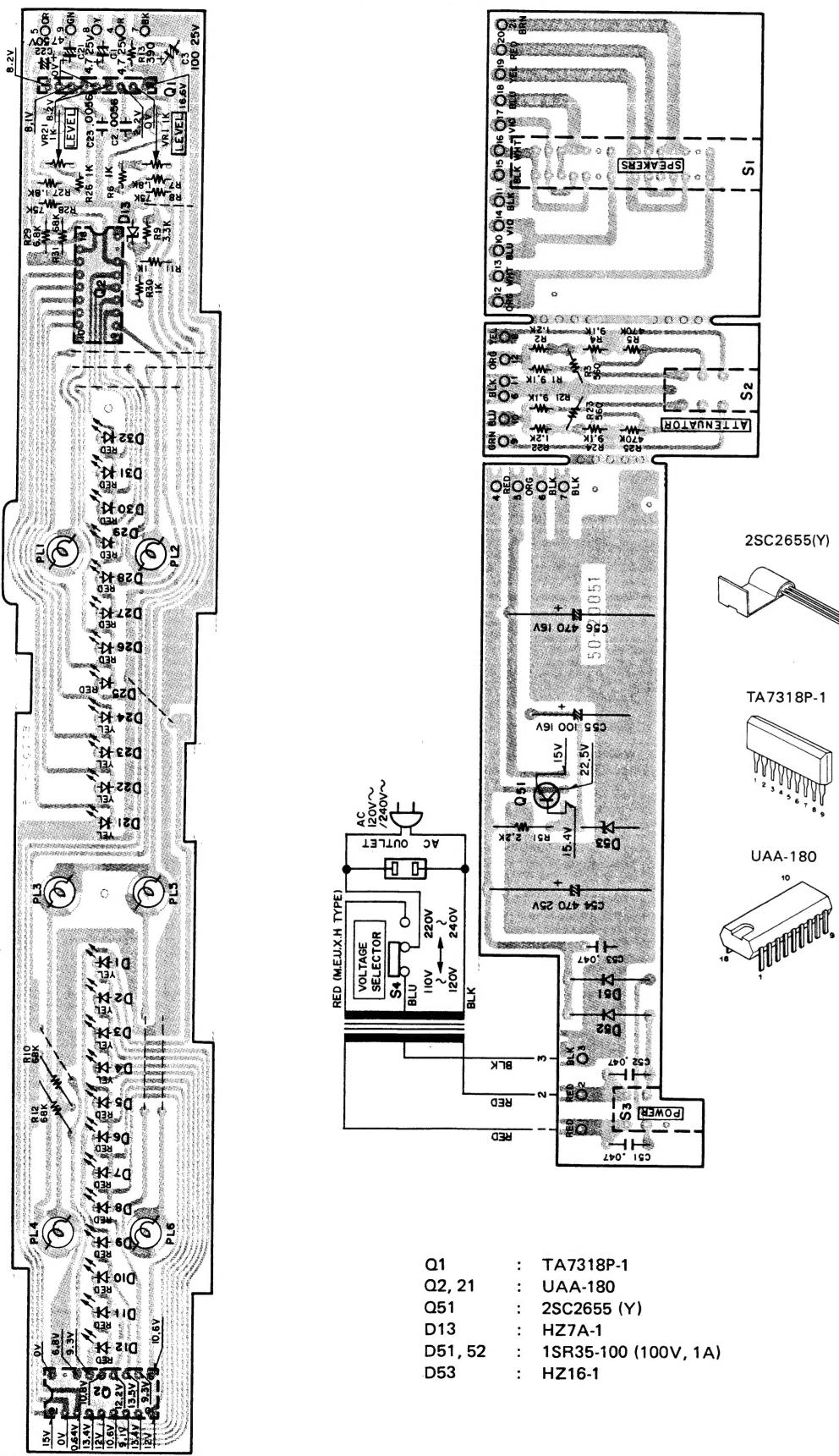


Q1~6: NJM4558DX
 D1~4: 1SR35-100



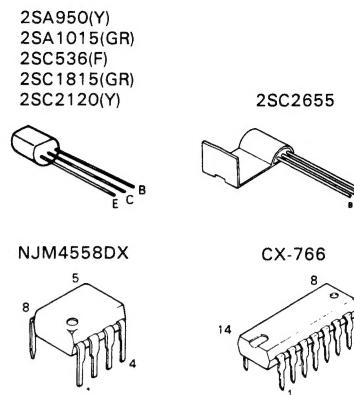
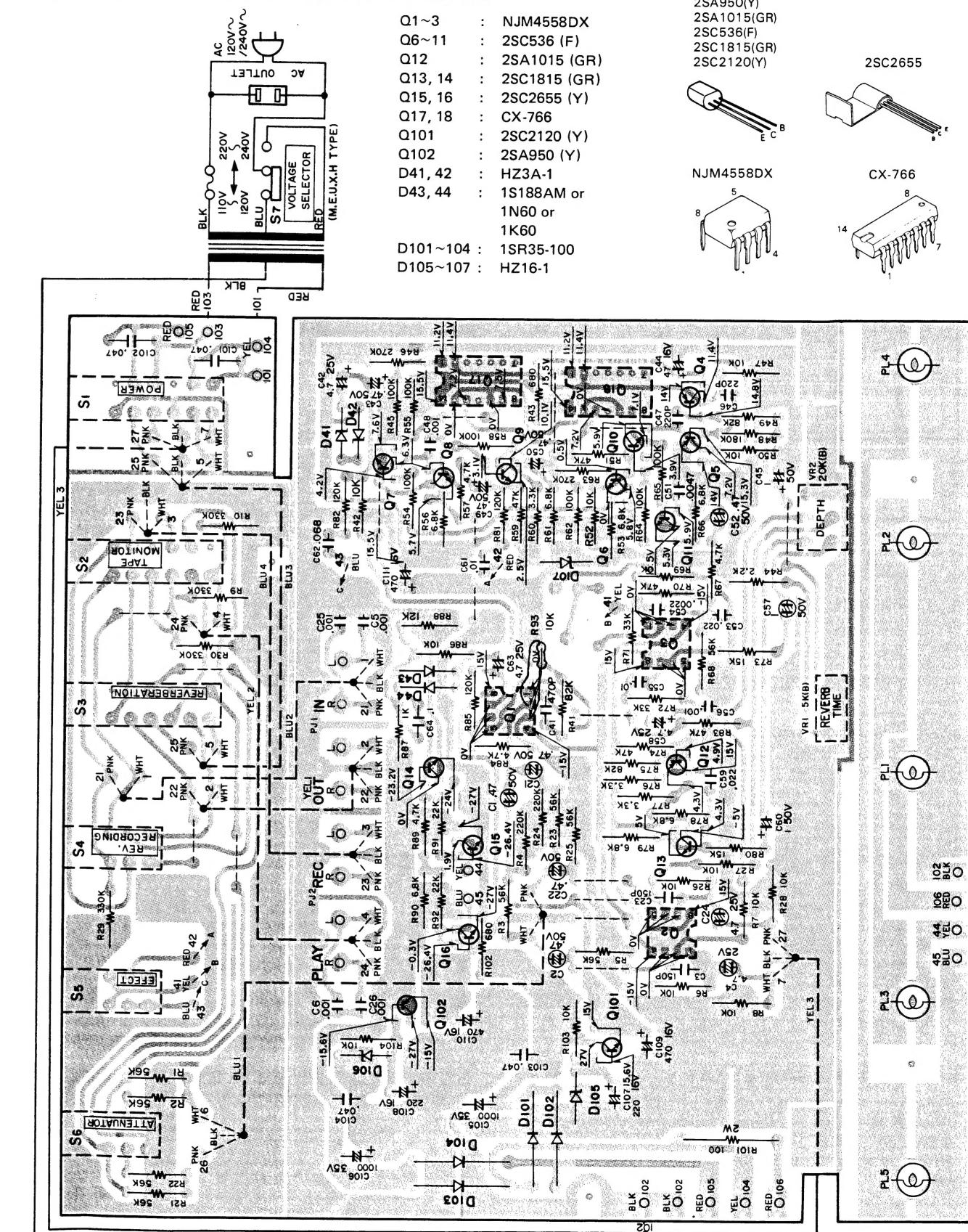
PM-80 PC BOARD

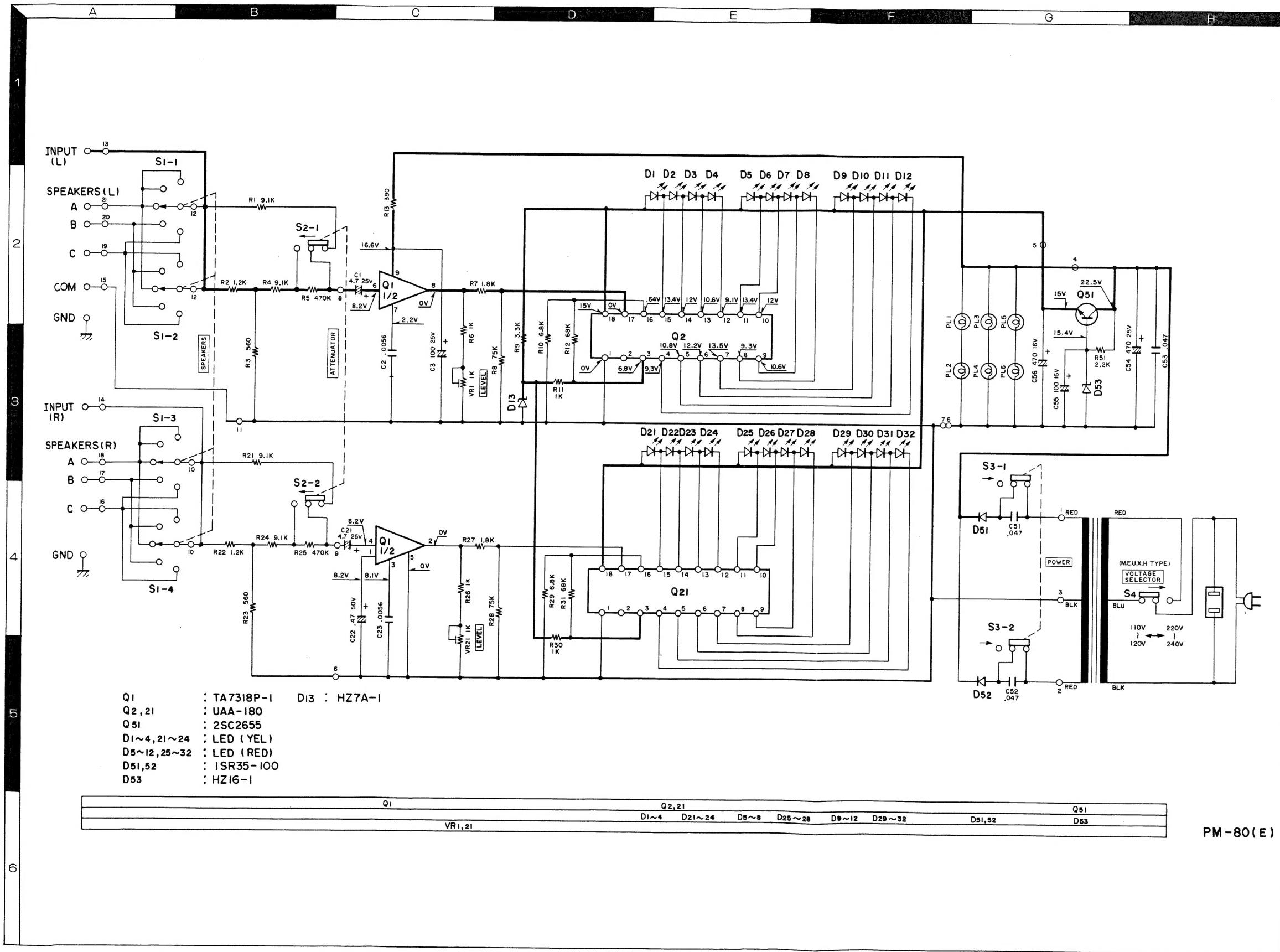
▼ PC BOARD ASS'Y (X13-2872-70) Foil side view

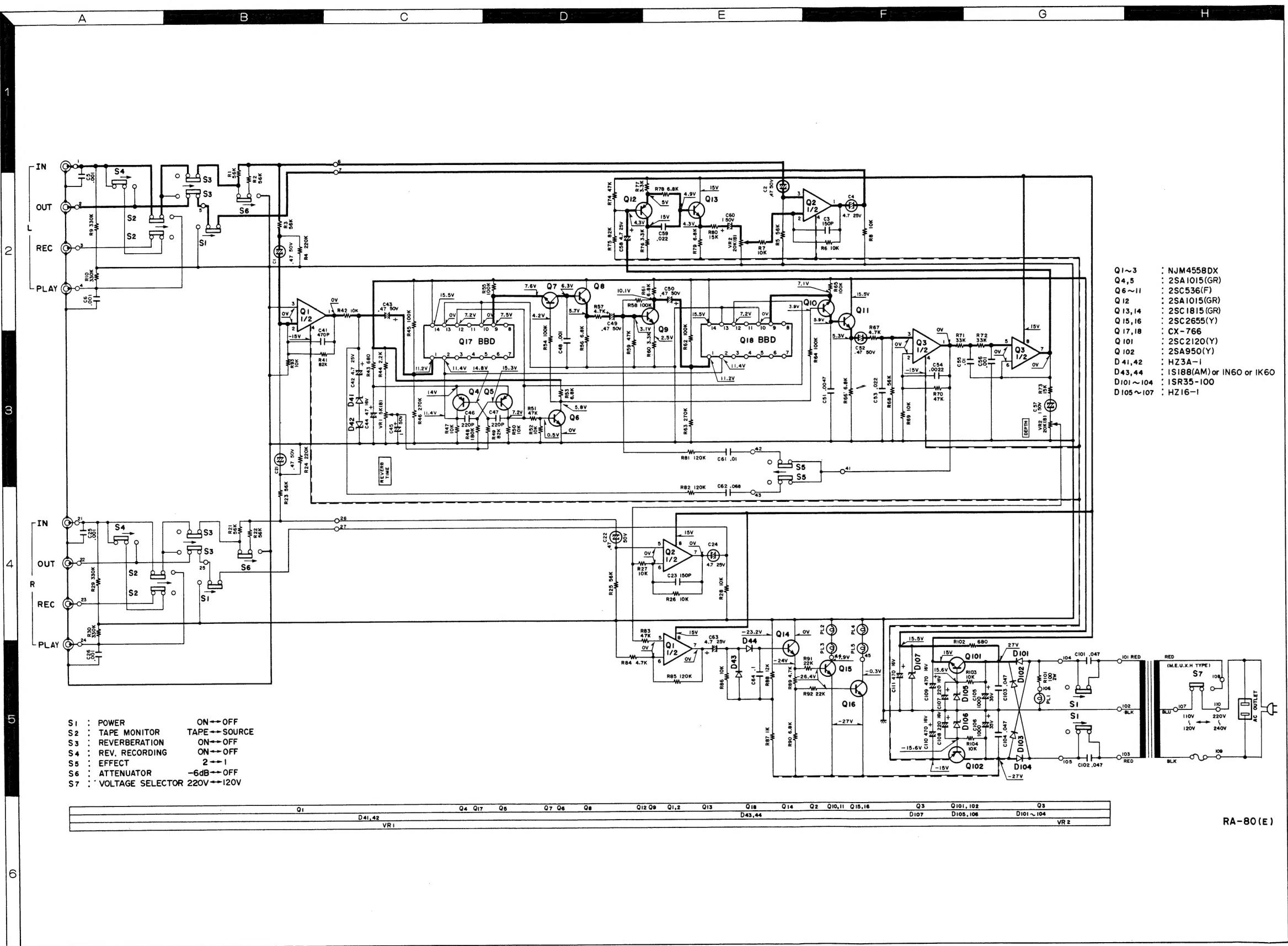


RA-80 PC BOARD

▼ PC BOARD ASS'Y (X14-1222-70) Foil side view







PARTS LIST

GE-80 PARTS LIST

☆ : New parts

Ref. No.	Parts No.	Description	Remarks
TOTAL (GE-80)			
1 1A	A01-0386-08	Cabinet	
2 2A	A20-1685-08	Front panel A	E ☆
2 2B	A20-1690-08	Front panel A	K,M,U,X,H ☆
2 2B	A20-1691-08	Front panel A	T ☆
3 2A	B07-0342-08	Knob guide x5	☆
4 2A	B11-0010-08	Filter A	☆
—	B50-3165-00	Instruction manual	UE,K,U,M,H,X ☆
—	B50-3166-00	Instruction manual	T ☆
—	B50-3167-00	Instruction manual (French)	E,M,X ☆
—	B50-3168-00	Instruction manual (Germany)	E ☆
—	B50-3169-00	Instruction manual (Dutch)	E ☆
—	B50-3170-00	Instruction manual (Swedish)	E ☆
5 3B	E03-0029-08	AC outlet	E ☆
5 3B	E03-0032-08	AC outlet	K ☆
5 3B	E03-0033-08	AC outlet	M,U,H ☆
—	E30-0652-08	Audio cord	☆
6 2B	E30-0651-08	Power cord	E ☆
6 2B	E30-0658-08	Power cord	M,U,H ☆
6 2B	E30-0659-08	Power cord	K ☆
6 2B	E30-0660-08	Power cord	T ☆
6 2B	E30-0661-08	Power cord	X ☆
—	H01-3183-08	Carton case	E ☆
—	H01-3200-08	Carton case	K,M,U,X,H ☆
—	H10-1554-08	Packing L	☆
—	H10-1555-08	Packing R	☆
—	H20-0461-08	Protection bag	☆
7 3B	J02-0110-08	Foot x4	☆
8 3B	J42-0088-08	Bushing	E,T ☆
8 3B	J42-0089-08	Bushing	U,M,H ☆
8 3B	J42-0090-08	Bushing	K ☆
8 3B	J42-0091-08	Bushing	X ☆
9 2A	K27-0162-08	Push knob x5	☆
10 2A	K27-0163-08	GE knob x10	☆
11 3A	L01-2124-08	Power transformer	K ☆
11 3A	L01-2126-08	Power transformer	M,E,T,U,X,H ☆
12 3A	S40-1026-08	Slide switch	M,E,U,X,H
13 1B	X11-1632-70	PC board ass'y	☆
PCB ASS'Y (X11-1632-70)			
101 2B	B30-0245-08	Lamp (0.05A)	☆
C1, 21	C46-1747-35	Mylar	0.047μF K
C2, 22	C26-1733-57	NP-Electrolytic	3.3μF 50WV
C3, 23	C46-1715-35	Mylar	0.015μF K
C4, 24	C26-1768-47	NP-Electrolytic	0.68μF 50WV
C5, 25	C46-1733-25	Mylar	0.0033μF K
C6, 26	C46-1715-46	Mylar	0.15μF K
C7, 27	C46-1710-26	Mylar	0.001μF K
C8, 28	C46-1747-35	Mylar	0.047μF K

Note:
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

Region	Code
U.S.A.	K
Canada	P
PX (Far East)	U
PX (Europe)	UE
Australia	X
Europe	E
England	T
South Africa	S
Other Areas	M
Audio Club	H

There is no plan for producing units of P and S types.

* Abbreviations of capacitors (Parts No. with initial letter "C")
 ELECTRO Electrolytic capacitor
 LL-ELEC Low leak electrolytic capacitor
 NP-ELEC Non-pole electrolytic capacitor
 MICA Mica capacitor
 POLYSTY Polystyrene capacitor
 MYLAR Mylar capacitor
 CERAMIC Ceramic capacitor
 TANTAL Tantalum capacitor
 MF Metallized film capacitor
 OIL Oil capacitor
 The unit "UF" is used in lieu of "μF"

* Abbreviations of resistors (Parts No. with initial letters "R").
 RC Carbon composition resistor
 RD Carbon film resistor
 FL-PROOF RD Flame-proof carbon film resistor
 RW Wire wound power resistor
 FL-PROOF RS Flame-proof metal oxide film resistor
 RN Metal film resistor
 2B Rated wattage 1/8W
 2E Rated wattage 1/4W
 2H Rated wattage 1/2W
 3A Rated wattage 1W
 3D Rated wattage 2W
 3F Rated wattage 3W
 3G Rated wattage 4W
 3H Rated wattage 5W
 All resistor values are indicated with the unit (Ω) omitted.

* Abbreviations common to capacitors and resistors
 C ±0.25pF (Used for capacitors only)
 D ±0.5pF (Used for capacitors only)
 F ±1%
 G ±2%
 J ±5%
 K ±10%
 M ±20%
 Z +80% -20% (Used for capacitors only)
 P +100% -0% (Used for capacitors only)
 Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.

PARTS LIST

Ref. No.	Parts No.	Description	Remarks
C9, 29	C47-1722-15	Polystyrene	220pF J
C10, 30	C46-1710-26	Mylar	0.001μF K
C11, 31	C52-1710-26	Ceramic	0.001μF K
C12, 32	C26-1722-57	NP-Electrolytic	2.2μF 50WV
C13, 33	C26-1447-57	NP-Electrolytic	4.7μF 25WV
C14, 15	C52-1710-26	Ceramic	0.001μF K
C34, 35	C52-1710-26	Ceramic	0.001μF K
C41, 42	C53-1747-37	Ceramic	0.047μF M
C43, 44	C55-1747-38	Ceramic	0.047μF Z
C45, 46	C24-6510-71	Electrolytic	100μF 35WV
C47, 48	C24-1210-81	Electrolytic	1000μF 16WV
102 1B	E13-0428-08	Phono jack (4P) x2	☆
R41, 42	R40-8356-15	FL-proof RC	560Ω J 2H
R43	R47-5533-05	FL-proof RS	33Ω J 3D
R44	R47-5424-05	FL-proof RS	240Ω J 3A
VR1~10	R13-5025-08	Slide pot	100kΩ(B) Fig. 103
S1	S40-4014-08	Pushbutton switch (POWER) Fig. 104	☆
S2~5	S42-4014-08	4 keys pushbutton switch Fig. 105	☆
Q1~6	V30-1020-26	IC NJM4558DX	☆
D1~4	V11-5101-50	Diode 1SR35-100	☆

PCB ASS'Y (X13-2872-70)

101 1B, 2B	B30-0244-08	Lamp (0.1A)	
D1~4	B30-0247-08	LED PY5531K (YEL)	
D21~24	B30-0247-08	LED PY5531K (YEL)	
D5~12	B30-0246-08	LED PR5531K (RED)	
D25~32	B30-0246-08	LED PR5531K (RED)	
C1	C24-1447-51	Electrolytic	4.7μF 25WV
C2	C46-1756-24	Mylar	0.0056μF G
C3	C24-1410-71	Electrolytic	100μF 25WV
C21	C24-1447-51	Electrolytic	4.7μF 25WV
C22	C24-1447-41	Electrolytic	0.47μF 25WV
C23	C46-1756-24	Mylar	0.0056μF G
C51, 52	C53-1747-37	Ceramic	0.047μF M
C53	C55-1747-38	Ceramic	0.047μF Z
C54	C24-1447-71	Electrolytic	470μF 25WV
C55	C24-1210-71	Electrolytic	100μF 16WV
C56	C24-1247-71	Electrolytic	470μF 16WV
VR1, 21	R12-1049-08	Trimming pot	1kΩ (B)
S1	S29-1128-08	Rotary-Slide switch	Fig. 102
S2	S40-1028-08	Pushbutton switch	Fig. 103
S3	S40-1029-01	Pushbutton switch	Fig. 104
Q1	V30-0292-10	IC TA7318P-1	☆
Q2, 21	V30-0502-10	IC UAA-18O	☆
Q51	V03-2655-10	Transistor 2SC2655 (Y)	
D13	V11-2104-20	Zener diode HZ7A-1	☆
D51, 52	V11-5101-50	Diode 1SR35-100 (100V, 1A)	
D53	V11-2104-30	Zener diode HZ16-1	

PARTS LIST

RA-80 PARTS LIST

Ref. No.	Parts No.	Description	Re-marks
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TOTAL (RA-80)

1 1A	A01-0386-08	Cabinet	
2 2A	A20-1683-08	Front panel B	E
2 2A	A20-1692-08	Front panel B	K,M,U,X,H
2 2A	A20-1693-08	Front panel B	T
3 2A	B07-0342-08	Knob guide x6	
4 2A	B11-0008-08	Filter B	
—	B50-3165-00	Instruction manual	UE,K,U,M,H,X
—	B50-3166-00	Instruction manual	T
—	B50-3167-00	Instruction manual (French)	E,M,X
—	B50-3168-00	Instruction manual (Germany)	E
—	B50-3169-00	Instruction manual (Dutch)	E
—	B50-3170-00	Instruction manual (Swedish)	E
5 2B	E03-0029-08	AC outlet	E
5 2B	E03-0032-08	AC outlet	K
5 2B	E03-0033-08	AC outlet	M,U,H
—	E30-0652-08	Audio cord	M,T,U,X,H
—	E30-0669-08	Audio cord	K
6 2B	E30-0651-08	Power cord	E
6 2B	E30-0658-08	Power cord	M,U,H
6 2B	E30-0659-08	Power cord	K
6 2B	E30-0660-08	Power cord	T
6 2B	E30-0661-08	Power cord	X
—	H01-3182-08	Carton case	E
—	H01-3202-08	Carton case	K,M,U,X,H
—	H10-1554-08	Packing L	★
—	H10-1555-08	Packing R	★
—	H20-0461-08	Protection bag	
7 3B	J02-0110-08	Foot x4	
8 2B	J42-0088-08	Bushing	E,T
8 2B	J42-0089-08	Bushing	U,M,H
8 2B	J42-0090-08	Bushing	K
8 2B	J42-0091-08	Bushing	X
9 2A	K23-0350-08	Knob (rotary) x2	
10 2A	K27-0162-08	Knob (push) x6	
11 3A	L01-2124-08	Power transformer	K
11 3A	L01-2126-08	Power transformer	M,E,T,U,X,H
12 2A	N29-0052-08	CS ring x2	★
13 3A	S40-1026-08	Slide switch	M,E,U,X,H
14 1B, 2B	X14-1222-70	PC board ass'y	★

Ref. No.	Parts No.	Description			Re-marks
PCB ASS'Y (X14-1220-70, 2-70)					
101 1B	B30-0244-08	Lamp (0.1A)			★
C1, 2	C26-1747-47	NP-electrolytic	0.47μF	50WV	
C21, 22	C26-1747-47	NP-electrolytic	0.47μF	50WV	
C3, 23	C71-1747-16	Ceramic	470pF	K	
C4, 24	C26-1747-57	NP-electrolytic	4.7μF	50WV	
C5, 6	C52-1710-26	Ceramic	0.001μF	K	
C25, 26	C52-1710-26	Ceramic	0.001μF	K	
C41	C71-1747-16	Ceramic	470pF	J	
C42	C24-1447-51	Electrolytic	4.7μF	25WV	
C43	C24-1747-41	Electrolytic	0.47μF	50WV	
C44	C24-1247-61	Electrolytic	47μF	16WV	
C45	C24-1710-51	Electrolytic	1μF	50WV	
C46, 47	C47-1722-15	Polystyrene	220pF	J	
C48	C46-1710-26	Mylar	0.001μF	K	
C49, 50	C24-1747-41	Electrolytic	0.47μF	50WV	
C51	C46-1747-25	Mylar	0.0047μF	J	
C52	C26-1747-47	NP-electrolytic	0.47μF	50WV	
C53, 54	C46-1722-35	Mylar	0.022μF	J	
C55	C46-1710-35	Mylar	0.01μF	J	
C56	C46-1710-26	Mylar	0.001μF	K	
C57	C26-1710-57	NP-electrolytic	1μF	50WV	
C58	C24-1447-51	Electrolytic	4.7μF	25WV	
C59	C46-1722-35	Mylar	0.022μF	J	
C60	C24-1710-51	Electrolytic	1μF	50WV	
C61	C46-1710-35	Mylar	0.01μF	J	
C62	C46-1768-35	Mylar	0.068μF	J	
C63	C24-1447-51	Electrolytic	4.7μF	25WV	
C101~104	C53-1747-37	Ceramic	0.047μF	M	
C105,106	C24-6510-81	Electrolytic	1000μF	35WV	
C107,108	C24-1222-71	Electrolytic	220μF	16WV	
C109~111	C24-1247-71	Electrolytic	470μF	16WV	
102 1B	E13-0428-08	Phono jack (4P) x2			
R101	R47-5410-15	FL-proof RS	100Ω	J 3D	★
VR1	R01-2014-08	Potentiometer	5kΩ (B)	Fig. 103	★
VR2	R06-3021-08	Potentiometer	20kΩ (B)	Fig. 104	★
S1	S40-1027-08	Pushbutton switch (POWER)			★
S2~6	S42-5018-08	5 keys pushbutton switch			★
Q1~3	V30-1020-26	IC	NJM4558DX		
Q6~11	V03-0339-05	Transistor	2SC536 (F)		
Q12	V01-1015-20	Transistor	2SA1015 (GR)		
Q13, 14	V03-1815-10	Transistor	2SC1815 (GR)		
Q15, 16	V03-2655-10	Transistor	2SC2655 (Y)		
Q17, 18	V30-0501-10	IC	CX-766		
Q101	V03-2120-00	Transistor	2SC2120 (Y)		
Q102	V01-0950-00	Transistor	2SA950 (Y)		
D41, 42	V11-2104-10	Zener diode	HZ3A-1		
D43, 44	V11-9990-05	Diode	1S188AM or		
	V11-0051-05		1N60 or		
	V11-9725-05		1K60		
D101~104	V11-5101-50	Diode	1SR35-100		
D105~107	V11-2104-30	Zener diode	HZ16-1		